

# Aayush Mishra

IT Engineering student  
Entrepreneurship  
development director  
rotarcact club| [Portfolio](#)

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## Personal Statement

I'm a passionate Information Technology student with a strong interest in Artificial Intelligence. Driven by curiosity, I love exploring how machines can think, learn, and solve problems. I've built projects using Python, NumPy, Pandas, and scikit-learn. Familiar with deep learning frameworks like TensorFlow and PyTorch. Always excited to turn complex ideas into real-world AI solutions. I enjoy learning, experimenting, and staying updated with the latest in AI. Looking for opportunities to apply my skills and grow in a dynamic environment.

## Work Experience

### Quantitative Research Intern

#### *JP Morgan (Online Internship)*

march 2025

- o Simulated quantitative research methods to analyze loan books, estimating customer default probability using dynamic programming (FICO score categorization).
- o Applied statistical modeling to predict financial risks, enhancing data-driven decision-making.

### advanced software engineering simulator

Walmart USA

april 2025

- o Designed a **novel heap data structure in Java** for Walmart's shipping logistics, optimizing package prioritization.
- o Created **UML diagrams** for a data processor and **ER diagrams** for a pet department database, improving system scalability.

## Tamizan skills(remote)

AIML / cybersecurity internship

may-july 2025

- o Built ML models using scikit-learn and deep learning models with TensorFlow.
- o Deployed real-time predictive analytics projects via Streamlit.
- o Conducted penetration testing using Nmap, Wireshark, and Metasploit.
- o Studied OWASP Top 10 and executed simulated security response tasks.

## 98+ Web Development Projects (HTML/CSS/JavaScript)

- Built interactive applications including GitHub Profile Clone, Meal Finder, and Wikipedia Clone.
- Developed games, form validators, and responsive landing pages.

## Air Piano (Python/C)

- Built a gesture-controlled piano using ultrasonic sensors, Python, and C, integrating real-time audio synthesis and ML for gesture recognition.
- Demonstrated expertise in embedded systems and signal processing.

**1)prompt generator** : supporting multiple foundation models (OpenAI, Gemini, Claude, Mistral), enabling dynamic, context-aware prompt creation for diverse use cases.

Enhanced productivity and consistency in AI outputs across platforms through a unified, customizable prompt interface.

**2)Developed "DAGBoard"** – a web app for real-time DAG visualization and miner analytics using React, Node.js, and D3.js. Integrated AI-based tips and educational modules to simplify BlockDAG mining insights for users.

**3)RailSafe**, a passenger-led web platform enabling real-time reporting of railway station safety issues. Integrated geotagged alerts and AI-driven triage to improve incident response and public accountability.

**4)PhishGuard** a Flask-based ML web app that detects phishing URLs in real-time using feature-based analysis and trained models.

Delivered accurate threat detection with visual risk indicators, enhancing user safety and awareness.

**5)CME TRACKER**:Designed a space-weather analytics pipeline using Python to detect Halo CME events from Aditya-L1/ASPEX data using anomaly detection techniques.

Integrated real-time alerting and visualization modules, inspired by ISRO's mission data architecture for hackhthon

## Education

**St john college of engineering and management (mumbai university)**

june 2023–may 2027

Btech in information technology

**Sonapant dandekar collage of science(maharashtra board)**

July 2021–march 2023

ATHARV ACADEMY english high school(maharashtra board)

## Skills

- **Languages:** Python, Java, SQL, C/C++, JavaScript, HTML/CSS, PHP
- **Frameworks:** Django
- **Tools:** AWS, Power BI, Tableau, MongoDB, Excel
- **Platforms:** Jupyter Notebook, VS Code, IntelliJ IDEA, Android Studio
- **Soft Skills:** Leadership (Rotaract Club Secretary 2024-25), Presentation (Finalist at SCRS USA Ideation by(FIU)), Stakeholder Management
- **AI Tools:** ChatGPT, Claude 3.5/3.7, Perplexity, Grok, Solidpoint.ai and many mores..

## Certifications

- **Infosys Springboard:** Java Programming, DBMS, Unix, Data Networking
- **Walmart:** Advanced Software Engineering
- **JP Morgan:** Quantitative Research
- **Rigel Tech:** AWS, Data Analytics, Web Development
- **NVIDIA:** *Ongoing – Advanced Generative AI*

# Aayush Mishra

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Dear sir/maam

## **Subject: Application for the Internship Position**

Dearsir/maam,

I am an Information Technology undergraduate with a passion for quantitative problem-solving and data-driven strategy. Through internships at J.P. Morgan and Walmart's engineering simulator, I have applied Python, statistical modeling, and algorithm design to real-world datasets—from forecasting loan-book default probabilities to optimizing logistics with novel data structures.

My academic projects— including machine-learning phishing detection, real-time safety analytics for Indian Railways, and a gesture-controlled “Air Piano”— demonstrate my ability to translate complex theory into impactful products. Proficient in Python, Java, SQL, and modern ML libraries, I thrive in fast-paced environments where rigorous analysis meets innovative technology.

I am excited by the prospect of bringing this blend of quantitative rigor and software craftsmanship to your team. An internship with your company would allow me to contribute meaningfully while deepening my expertise in advanced analytical methods and market-focused technology.

Sincerely,

**Aayush Mishra**